Amendments to the Claims

The following listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (Currently Amended) An isolated antibody comprising a heavy chain CDR3 having an amino acid that is:

(a) an amino acid sequence comprising at least 7 of the amino acids of SEQ ID NO:36 in the same order and spacing as they occur in SEQ ID NO:36; or

(b) an amino acid sequence comprising SEQ ID NO:37;

wherein the antibody ~~can bind~~ specifically binds to IFN-γ.

2. (Original) The antibody of claim 1, further comprising a light chain CDR3 having an amino acid sequence that is:

(a) an amino acid sequence comprising at least 8 of the amino acids of SEQ ID NO:43 in the same order and spacing as they occur in SEQ ID NO:43; or

(b) an amino acid sequence comprising at least 9 of the amino acids of SEQ ID NO:44 in the same order and spacing as they occur in SEQ ID NO:44.

3. (Original) The antibody of claim 2, wherein the heavy chain CDR3 comprises the amino acids of SEQ ID NO:36 and the light chain CDR3 comprises the amino acids of SEQ ID NO:43.

4. (Original) The antibody of claim 1 comprising a first amino acid sequence at least 80% identical to SEQ ID NO:6, SEQ ID NO:10, SEQ ID NO:14, and/or SEQ ID NO:30,

wherein the alignment between the first amino acid sequence and SEQ ID NO:6, SEQ ID NO:10, SEQ ID NO:14, and/or SEQ ID NO:30 spans at least 50 amino acids.

5. (Original) The antibody of claim 4, wherein the first amino acid sequence is 90% identical to SEQ ID NO:6, SEQ ID NO:10, SEQ ID NO:14, and/or SEQ ID NO:30.

6. (Original) The antibody of claim 5, wherein the first amino acid sequence is identical to SEQ ID NO:6, SEQ ID NO:10, SEQ ID NO:14, or SEQ ID NO:30.

7. (Original) The antibody of claim 4, comprising a second amino acid sequence at least 80% identical to SEQ ID NO:8, SEQ ID NO:12, SEQ ID NO:16, and/or SEQ ID NO:31,

wherein the alignment between the second amino acid sequence and SEQ ID NO:8, SEQ ID NO:12, SEQ ID NO:16, and/or SEQ ID NO:31 spans at least 50 amino acids.

8. (Original) The antibody of claim 7, wherein the second amino acid sequence is at least 90% identical to SEQ ID NO:8, SEQ ID NO:12, SEQ ID NO:16, and/or SEQ ID NO:31.

9. (Original) The antibody of claim 8, wherein the second amino acid sequence is identical to SEQ ID NO:8, SEQ ID NO:12, SEQ ID NO:16, or SEQ ID NO:31.

10. (Original) The antibody of claim 1 comprising a first amino acid sequence at least 80% identical to SEQ ID NO:17, SEQ ID NO:19, SEQ ID NO:21, and/or SEQ ID NO:32,

wherein the alignment between the first amino acid sequence and SEQ ID NO:17, SEQ ID NO:19, SEQ ID NO:21, and/or SEQ ID NO:32 spans at least 50 amino acids.

11. (Original) The antibody of claim 10, wherein the first amino acid sequence is at least 90% identical to SEQ ID NO:17, SEQ ID NO:19, SEQ ID NO:21, and/or SEQ ID NO:32.

12. (Original) The antibody of claim 11, wherein the first amino acid sequence is identical to SEQ ID NO:17, SEQ ID NO:19, SEQ ID NO:21, or SEQ ID NO:32.

13. (Original) The antibody of claim 10, comprising a second amino acid sequence at least 80% identical to SEQ ID NO:18, SEQ ID NO:20, SEQ ID NO:22, and/or SEQ ID NO:33,

wherein the alignment between the second amino acid sequence and SEQ ID NO:18, SEQ ID NO:20, SEQ ID NO:22, and/or SEQ ID NO:33 spans at least 50 amino acids.

14. (Original) The antibody of claim 13, wherein the second amino acid sequence is at least 90% identical to SEQ ID NO:18, SEQ ID NO:20, SEQ ID NO:22, and/or SEQ ID NO:33.

15. (Original) The antibody of claim 14, wherein the second amino acid sequence is identical to SEQ ID NO:18, SEQ ID NO:20, SEQ ID NO:22, or SEQ ID NO:33.

16. (Original) The antibody of claim 1, wherein the antibody is a humanized antibody or a fully human antibody.

17. (Withdrawn) An isolated polynucleotide encoding the antibody of claim 1.

18. (Withdrawn) A method comprising administering to a subject suffering from an IFN-γ mediated disease a therapeutically effective amount of the antibody of claim 1.

19. (Original) A composition comprising a pharmaceutically acceptable carrier and the antibody of claim 1.

20. (Withdrawn) The method of claim 18, wherein the IFN-γ mediated disease is that is AIDS, rheumatoid arthritis, including juvenile rheumatoid arthritis,

inflammatory bowel diseases including ulcerative colitis and Crohn's disease, multiple sclerosis, Addison's disease, diabetes (type I), epididymitis, glomerulonephritis, Graves' disease, Guillain-Barre syndrome, Hashimoto's disease, hemolytic anemia, systemic lupus erythematosus (SLE), lupus nephritis, myasthenia gravis, pemphigus, psoriasis, psoriatic arthritis, atherosclerosis, erythropoietin resistance, graft versus host disease, transplant rejection, autoimmune hepatitis-induced hepatic injury, biliary cirrhosis, alcohol-induced liver injury including alcoholic cirrhosis, rheumatic fever, sarcoidosis, scleroderma, Sjogren's syndrome, spondyloarthropathies including ankylosing spondylitis, thyroiditis, or vasculitis.

21. (Original) An isolated antibody comprising a light chain CDR3 having an amino acid sequence that is:

(a) an amino acid sequence comprising at least 8 of the amino acids of SEQ ID NO:43 in the same order and spacing as they occur in SEQ ID NO:43; or

(b) an amino acid sequence comprising at least 9 of the amino acids of SEQ ID NO:44 in the same order and spacing as they occur in SEQ ID NO:44;

wherein the antibody can bind specifically to IFN-γ.

22. (Original) The antibody of claim 21 further comprising a CDR having the amino acid sequence of SEQ ID NO:35, SEQ ID NO:36, SEQ ID NO:37, SEQ ID NO:38, SEQ ID NO:39, SEQ ID NO:40, SEQ ID NO:41, or SEQ ID NO:42.

23. (Currently Amended) An isolated antibody comprising a first amino acid sequence that is:

(a) an amino acid sequence at least 96% identical to SEQ ID NO:6;

(b) an amino acid sequence at least 93% identical to SEQ ID NO:10;

(c) an amino acid sequence at least 91% identical to SEQ ID NO:14; or

(d) an amino acid sequence at least 98% SEQ ID NO:30;

wherein the alignment between the first amino acid sequence and SEQ ID NO:6, SEQ ID NO:10, SEQ ID NO:14, or SEQ ID NO:30 spans at least 50 amino acids, and

wherein the antibody ~~can bind~~ specifically binds to IFN-γ.

24. (Original) The antibody of claim 23, wherein the first amino acid sequence is at least 96% identical to SEQ ID NO:6, at least 95% identical to SEQ ID NO:10, at least 95% identical to SEQ ID NO:14, or at least 98% identical to SEQ ID NO:30.

25. (Original) The antibody of claim 24, wherein the first amino acid sequence is identical to SEQ ID NO:6, SEQ ID NO:10, SEQ ID NO:14, or SEQ ID NO:30.

26. (Original) The antibody of claim 23, wherein the first amino acid sequence comprises at least 5 of the amino acids in SEQ ID NO:36 and/or SEQ ID NO:37 in the same order and spacing as they occur in SEQ ID NO:36 and/or SEQ ID NO:37.

27. (Original) The antibody of claim 23, further comprising a second amino acid sequence at least 80% identical to SEQ ID NO:8, SEQ ID NO:12, SEQ ID NO:16, and/or SEQ ID NO:31, wherein the alignment between the second amino acid sequence and SEQ ID NO:8, SEQ ID NO:12, SEQ ID NO:16, and/or SEQ ID NO:31 spans at least 50 amino acids.

28. (Original) The antibody of claim 27, wherein the second amino acid sequence is at least 90% identical to SEQ ID NO:8, SEQ ID NO:12, SEQ ID NO:16, and/or SEQ ID NO:31.

29. (Original) The antibody of claim 27, wherein the second amino acid sequence comprises at least 6 of the amino acids in SEQ ID NO:43 or SEQ ID NO:44 in the same order and spacing as they occur in SEQ ID NO:43 or SEQ ID NO:44.

30. (Withdrawn) An isolated polynucleotide encoding the antibody of claim 23.

31. (Withdrawn) A method comprising administering to a patient suffering from an IFN-γ mediated disease a therapeutically effective amount of the antibody of claim 23.

32. (Original) A composition comprising a pharmaceutically acceptable carrier and the antibody of claim 23.

33. (Withdrawn) The method of claim 31, wherein the IFN-γ mediated disease is that is AIDS, rheumatoid arthritis, including juvenile rheumatoid arthritis, inflammatory bowel diseases including ulcerative colitis and Crohn's disease, multiple sclerosis, Addison's disease, diabetes (type I), epididymitis, glomerulonephritis, Graves' disease, Guillain-Barre syndrome, Hashimoto's disease, hemolytic anemia, systemic lupus erythematosus (SLE), lupus nephritis, myasthenia gravis, pemphigus, psoriasis, psoriatic arthritis, atherosclerosis, erythropoietin resistance, graft versus host disease, transplant rejection, autoimmune hepatitis-induced hepatic injury, biliary cirrhosis, alcohol-induced liver injury including alcoholic cirrhosis, rheumatic fever, sarcoidosis, scleroderma, Sjogren's syndrome, spondyloarthropathies including ankylosing spondylitis, thyroiditis, or vasculitis.

34. (Currently Amended) An isolated antibody comprising a first amino acid sequence that is:

(a) an amino acid sequence at least 97% identical to SEQ ID NO:8;
(b) an amino acid sequence at least 96% identical to SEQ ID NO:12;
(c) an amino acid sequence at least 97% identical to SEQ ID NO:16; or
(d) an amino acid sequence at least 95% identical to or SEQ ID NO:31;

wherein the alignment between SEQ ID NO:8, SEQ ID NO:12, SEQ ID NO:16, or SEQ ID NO:31 and the first amino acid sequence spans at least 50 amino acids, and

wherein the antibody ~~can bind specifically~~ specifically binds to IFN-γ.

35. (Original) The antibody of claim 34, wherein the first amino acid sequence is at least 97% identical to SEQ ID NO:8, SEQ ID NO:12, SEQ ID NO:16, or SEQ ID NO:31.

36. (Original) The antibody of claim 35, wherein the first amino acid sequence is identical to SEQ ID NO:8, SEQ ID NO:12, SEQ ID NO:16, or SEQ ID NO:31.

37. (Original) The antibody of claim 34, wherein the first amino acid sequence comprises at least 6 of the amino acids in SEQ ID NO:43 or SEQ ID NO:44 in the same order and spacing as they occur in SEQ ID NO:43 or SEQ ID NO:44.

38. (Original) The antibody of claim 34, further comprising a second amino acid sequence at least 80% identical to SEQ ID NO:6, SEQ ID NO:10, SEQ ID NO:14, and/or SEQ ID NO:30,

wherein the alignment between the second amino acid sequence and SEQ ID NO:6, SEQ ID NO:10, SEQ ID NO:14, and/or SEQ ID NO:30 spans at least 50 amino acids.

39. (Original) The antibody of claim 38, wherein the second amino acid sequence is at least 90% identical to SEQ ID NO:6, SEQ ID NO:10, SEQ ID NO:14, and/or SEQ ID NO:30.

40. (Original) The antibody of claim 38, wherein the second amino acid sequence comprises at least 5 of the amino acids in SEQ ID NO:36 and/or SEQ ID NO:37 in the same order and spacing as they occur in SEQ ID NO:36 and/or SEQ ID NO:37.

41. (Currently amended) An isolated ~~fully human~~ antibody,

wherein the antibody can inhibit the biological activity of human IFN-γ and chimpanzee IFN-γ,

wherein the antibody cannot inhibit the biological activity of cynomolgus monkey IFN-γ and murine IFN-γ, and

~~wherein the antibody comprises a heavy chain comprising a VH region, a CH1 region, a CH2 region, and a CH3 region and a the light chain comprising a VL region and a CL region.~~

wherein the antibody cannot inhibit the biological activity of a mutated version of human IFN-γ in which the histidine at position 19 has been replaced with aspartate and/or in which the serine at position 20 has been replaced with a proline.

42. (Currently amended) The antibody of claim 41, wherein ~~substitution of residue 20 of human IFN-γ with praline antagonizes the inhibition of the biological activity of human IFN-γ by the antibody.~~the antibody is human or humanized.

43. (Currently Amended) An isolated antibody,

wherein the antibody can inhibit the biological activity of human IFN-γ and chimpanzee IFN-γ,

wherein the antibody cannot inhibit the biological activity of cynomolgus monkey IFN-γ and murine IFN-γ,~~The antibody of claim 41~~,

wherein the antibody can inhibit the biological activity of a mutated version of cynomolgus monkey IFN-γ, wherein the mutated version comprises a histidine at position 19 in place of aspartate, a serine at position 20 in place of proline, and a serine at position 65 in place of arginine.

44. (Currently amended) ~~An isolated~~ The antibody of claim 43,~~wherein the antibody can inhibit the biological activity of human IFN-γ, wherein substitution of residue 20 of human IFN-γ with proline antagonizes the inhibition of the biological activity of human IFN-γ by the antibody, and~~ wherein the antibody is ~~fully~~ human or humanized.

45. (Currently Amended) An isolated antibody comprising a light chain CDR1, a light chain CDR2, a light chain CDR3, a heavy chain CDR1, a heavy chain CDR2, and a heavy chain CDR3, wherein

the heavy chain CDR1 has the amino acid sequence of SEQ ID NO:34;

the heavy chain CDR2 has the amino acid sequence of SEQ ID NO:35;

the heavy chain CDR3 has the amino acid sequence of SEQ ID NO:36 or SEQ ID NO:37;

the light chain CDR1 has the amino acid sequence of SEQ ID NO:38, SEQ ID NO:39, or SEQ ID NO:40;

the light chain CDR2 has the amino acid sequence of SEQ ID NO:41 or SEQ ID NO:42;

the light chain CDR3 has the amino acid sequence of SEQ ID NO:43 or SEQ ID NO:44; and

the antibody ~~can bind~~ specifically binds to IFN-γ.

46. (Original) The antibody of claim 45, wherein

the heavy chain CDR3 has the amino acid sequence of SEQ ID NO:36,

the light chain CDR1 has the amino acid sequence of SEQ ID NO:38,

the light chain CDR2 has the amino acid sequence of SEQ ID NO:41, and

the light chain CDR3 has the amino acid sequence of SEQ ID NO:43.

47. (Original) The antibody of claim 45, wherein the antibody is a humanized antibody or a fully human antibody.

48. (Original) The antibody of claim 45 comprising

a first amino acid sequence at least 80% identical to SEQ ID NO:17, SEQ ID NO:19, SEQ ID NO:21, and/or SEQ ID NO:32, wherein the alignment between the first amino acid sequence and SEQ ID NO:17, SEQ ID NO:19, SEQ ID NO:21, and/or SEQ ID NO:32 spans at least 50 amino acids and wherein the first amino acid sequence includes the heavy chain CDR1, CDR2, and CDR3 amino acid sequences, and

a second amino acid sequence at least 80% identical to SEQ ID NO:18, SEQ ID NO:20, SEQ ID NO:22, and/or SEQ ID NO:33, wherein the alignment between the second amino acid sequence and SEQ ID NO:18, SEQ ID NO:20, SEQ ID NO:22, and/or SEQ ID NO:33 spans at least 50 amino acids and wherein the second amino acid sequence includes the light chain CDR1, CDR2, and CDR3 amino acid sequences.

49. (Original) The antibody of claim 48 wherein

the first amino acid sequence is at least 90% identical to SEQ ID NO:17, SEQ ID NO:19, SEQ ID NO:21, and/or SEQ ID NO:32, and

the second amino acid sequence is at least 90% identical to SEQ ID NO:18, SEQ ID NO:20, SEQ ID NO:22, and/or SEQ ID NO:33.

50. (Original) The antibody of claim 49 wherein

the first amino acid sequence is identical to SEQ ID NO:17, SEQ ID NO:19, SEQ ID NO:21, or SEQ ID NO:32 and

the second amino acid sequence is identical to SEQ ID NO:18, SEQ ID NO:20, SEQ ID NO:22, or SEQ ID NO:33.

51. (Original) The antibody of claim 45 comprising

a first amino acid sequence at least 80% identical to SEQ ID NO:6, SEQ ID NO:10, SEQ ID NO:14, and/or SEQ ID NO:30, wherein the alignment between the first amino acid sequence and SEQ ID NO:6, SEQ ID NO:10, SEQ ID NO:14, and/or SEQ ID NO:30 spans at least 50 amino acids and wherein the first amino acid sequence includes the heavy chain CDR1, CDR2, and CDR3 amino acid sequences; and

a second amino acid sequence at least 80% identical to SEQ ID NO:8, SEQ ID NO:12, SEQ ID NO:16, and/or SEQ ID NO:31, wherein the alignment between the second amino acid sequence and SEQ ID NO:8, SEQ ID NO:12, SEQ ID NO:16, and/or SEQ ID NO:31 spans at least 50 amino acids and wherein the second amino acid sequence includes the light chain CDR1, CDR2, and CDR3 amino acid sequences.

52. (Original) The antibody of claim 51 wherein

the first amino acid sequence is at least 90% identical to SEQ ID NO:6, SEQ ID NO:10, SEQ ID NO:14, and/or SEQ ID NO:30, and

the second amino acid sequence is at least 90% identical to SEQ ID NO:8, SEQ ID NO:12, SEQ ID NO:16, and/or SEQ ID NO:31.

53. (Original) The antibody of claim 52 wherein

the first amino acid sequence is identical to SEQ ID NO:6, SEQ ID NO:10, SEQ ID NO:14, and/or SEQ ID NO:30 and

the second amino acid sequence is identical to SEQ ID NO:8, SEQ ID NO:12, SEQ ID NO:16, and/or SEQ ID NO:31.

54. (Withdrawn) An isolated polynucleotide encoding the antibody of claim 45.

55. (Withdrawn) A method comprising administering to a subject suffering from an IFN-γ mediated disease a therapeutically effective amount of the antibody of claim 45.

56. (Original) A composition comprising a pharmaceutically acceptable carrier and a therapeutically effective amount of the antibody of claim 45.

57. (Withdrawn) The method of claim 55, wherein the IFN-γ mediated disease is that is AIDS, rheumatoid arthritis, including juvenile rheumatoid arthritis, inflammatory bowel diseases including ulcerative colitis and Crohn's disease, multiple sclerosis, Addison's disease, diabetes (type I), epididymitis, glomerulonephritis, Graves' disease, Guillain-Barre syndrome, Hashimoto's disease, hemolytic anemia, systemic lupus erythematosus (SLE), lupus nephritis, myasthenia gravis, pemphigus, psoriasis, psoriatic arthritis, atherosclerosis, erythropoietin resistance, graft versus host disease, transplant rejection, autoimmune hepatitis-induced hepatic injury, biliary cirrhosis, alcohol-induced liver injury including alcoholic cirrhosis, rheumatic fever, sarcoidosis, scleroderma, Sjogren's syndrome, spondyloarthropathies including ankylosing spondylitis, thyroiditis, or vasculitis.

58. (Currently Amended) An isolated antibody comprising:

(a) an amino acid sequence comprising SEQ ID NO:6, SEQ ID NO:10, SEQ ID NO:14, or SEQ ID NO:30, or a fragment of one of these sequences; and

(b) an amino acid sequence comprising SEQ ID NO:8, SEQ ID NO:12, SEQ ID NO:16, or SEQ ID NO:31, or a fragment of one of these sequences,

wherein the fragments of (a) and (b) comprise at least 20 amino acids, and

wherein the antibody ~~can bind~~ specifically binds to IFN-γ.

59. (Original) The antibody of claim 58, wherein the antibody comprises a heavy chain and a light chain,

wherein the heavy chain comprises a V_H region, a C_H1 region, a C_H2, region, and a C_H3 region, and

wherein the light chain comprises a V_L region and a C_L region.

60. (Original) The antibody of claim 58, wherein the antibody comprises SEQ ID NO:6 and SEQ ID NO:8.